

## Title (en)

Orifice device having multiple channels with varying flow rates for drug delivery

## Title (de)

Vorrichtung mit einer Öffnung umfaßend mehrere Kanäle mit verschiedenen Durchflußraten zur Verabreichung von Medikamenten

## Title (fr)

Dispositif à orifice à multiple canaux avec des débits différents pour l'administration de médicaments

## Publication

**EP 1600187 A3 20051207 (EN)**

## Application

**EP 05253247 A 20050526**

## Priority

US 85523904 A 20040527

## Abstract (en)

[origin: EP1600187A2] An orifice device for delivering one or more drugs includes an inner member (210) having a proximal end and a distal end; and a winding helically wound around the inner member. The winding includes a plurality of distinct wires (222,222',222'') helically wound in parallel around the inner member. The winding and the inner member define at least three separate channels (230a,230b,230c,240a,240b,240c) for carrying one or more drugs therethrough. An inlet is at the proximal end of the winding and an outlet is at the distal end of the winding for the plurality of distinct wires. In some embodiments, at least two of the plurality of distinct wires have a different dimension. An outer member (226) is used over the winding. Also, at least two of the at least three separate channels have a different fluid flow rate. And, in some embodiments, at least two of the at least three separate channels carry a different drug. <IMAGE>

## IPC 1-7

**A61M 5/168**; **F16K 1/40**; **F16K 47/12**; **G05D 7/01**; **A61M 25/00**

## IPC 8 full level

**A61M 5/32** (2006.01); **A61J 3/07** (2006.01); **A61K 9/22** (2006.01); **A61M 5/168** (2006.01); **A61M 5/178** (2006.01); **A61M 5/28** (2006.01); **A61M 25/00** (2006.01); **A61M 37/00** (2006.01); **F16K 1/40** (2006.01); **F16K 47/12** (2006.01); **G05D 7/01** (2006.01); **A61K 9/00** (2006.01); **A61M 5/14** (2006.01); **A61M 5/142** (2006.01)

## CPC (source: EP KR US)

**A61K 9/0004** (2013.01 - EP US); **A61M 5/14276** (2013.01 - EP US); **A61M 5/16877** (2013.01 - EP US); **A61M 5/178** (2013.01 - KR); **A61M 5/28** (2013.01 - KR); **A61M 5/32** (2013.01 - KR); **F16K 1/40** (2013.01 - EP US); **F16K 47/12** (2013.01 - EP US); **A61M 5/1408** (2013.01 - EP US); **A61M 5/141** (2013.01 - EP US); **A61M 5/14526** (2013.01 - EP US); **A61M 5/16804** (2013.01 - EP US); **A61M 5/16813** (2013.01 - EP US); **A61M 2005/14513** (2013.01 - EP US)

## Citation (search report)

- [A] US 4411292 A 19831025 - SCHILLER ARMINIO [IL]
- [A] DE 19934445 A1 20010201 - WEIS OLIVER [DE]

## Cited by

AU2007266475B2; USD933219S; US11246913B2; WO2007140416A3; US9889085B1; US10583080B2; US9724293B2; US10441528B2; US9682127B2; US10363287B2; US10925639B2; USD835783S; US10159714B2; USD840030S; US10231923B2; US10869830B2; USD962433S; US10501517B2; US11214607B2; US11840559B2; US8052996B2; US8158150B2; US8273365B2; US8367095B2; US8470353B2; US8992962B2; USD860451S; USD912249S; US10527170B2; US10835580B2; US11654183B2

## Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR

## DOCDB simple family (publication)

**EP 1600187 A2 20051130**; **EP 1600187 A3 20051207**; **EP 1600187 B1 20090121**; AT E421349 T1 20090215; AU 2005201877 A1 20051215; AU 2005201877 B2 20100617; CA 2507368 A1 20051127; CA 2507368 C 20121002; DE 602005012455 D1 20090312; DK 1600187 T3 20090420; ES 2319127 T3 20090504; HK 1085143 A1 20060818; IL 168361 A 20111229; JP 2005334651 A 20051208; JP 4879517 B2 20120222; KR 20060046183 A 20060517; PL 1600187 T3 20090731; PT 1600187 E 20090317; US 2005004557 A1 20050106; US 8491571 B2 20130723

## DOCDB simple family (application)

**EP 05253247 A 20050526**; AT 05253247 T 20050526; AU 2005201877 A 20050504; CA 2507368 A 20050517; DE 602005012455 T 20050526; DK 05253247 T 20050526; ES 05253247 T 20050526; HK 06105413 A 20060509; IL 16836105 A 20050503; JP 2005154377 A 20050526; KR 20050044384 A 20050526; PL 05253247 T 20050526; PT 05253247 T 20050526; US 85523904 A 20040527